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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,820	09/30/2003	Eran Steinberg	FN-104E-US	3065
72104	7590	07/15/2009	EXAMINER	
Tessera/FotoNation Patent Legal Dept. 3025 Orchard Parkway San Jose, CA 95134			LEE, JOHN W	
			ART UNIT	PAPER NUMBER
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			07/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/676,820	Applicant(s) STEINBERG ET AL.	
	Examiner JOHN Wahnkyo LEE	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 and 11-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10 and 43-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- The application was forwarded to the examiner on 12 May 2009.

Response to Amendment/Arguments

1. Applicant's amendment and arguments filed on 12 May 2009 have been fully considered.

2. Summary of Applicant's remark

1) Status of the application:

Claims 1-3, 7-10 and 43-56 are pending; claim 1 is amended; claims 43-56 are added; claims 4-6 and 11-42 are canceled.

2) Ground of rejections to be reviewed:

- Double patenting rejection
- Claim rejections under 35 USC 101
- Claim rejections under 35 USC 112
- Claim rejections under 35 USC 103

3. Response to Applicant's remark

1) Double patenting rejection:

As the applicant filed a Terminal Discloser, the rejection will be withdrawn.

2) Claim rejection under 35 USC 101

Applicant's arguments with respect to claims 1-3 and 7-10 have been considered.

The rejection will be withdrawn, for the claims are tied to embodied structure, "a

processor of the digital camera.”

3) Claim rejection under 35 USC 112:

Applicant arguments with respect to claim 1 have been considered. The rejection will be withdrawn.

4) Claim rejection under 35 USC 103:

Applicant's arguments with respect to claims 1-3, 7-10 have been considered, but are moot in view of the new ground(s) of rejection

6) New grounds rejection will provided below including the new added claims 43-56.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7-8, 10, 43-47, 49, 50-54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (WO 03/019473) in view of Kitawaki et al. (US 2002/0093577).

Regarding claim 1, Robins discloses a method of automatically determining a need to service a digital image acquisition system including a digital camera with a lens assembly and electronic sensor array, the method comprising using a processor of the digital camera (Fig. 1; abstract; page 15, “digital camera”) in: determining a probability that pixels within one or more acquired digital images correspond to blemish artifacts

(Fig. 3; page 16, "... threshold ... defect map ..."; Fig. 9B; page 17, "Gaussian approximation ...") generating a master dust map describing physical manifestations of dust on the electronic sensor array based on the determining (Fig. 9B; page 17, "Gaussian approximation ..."); analyzing pixels within one or more acquired digital images according to the probability determinations to determine whether a threshold distribution of blemish artifacts is present within one or more of said digital images (Fig. 9B; page 17, "Gaussian approximation ..."); determining based on the updating whether a threshold distribution of dust artifacts is present within said one or more further acquired of said digital images (Fig. 9B; page 17, "Gaussian approximation ..."); (e) indicating a need for service of the system, including a cleaning process, by notifying a system user when at least said threshold distribution is determined to be present (Figs. 10 and 12; page 15, "identifying the defects ..."; page 18, "dust mark tool ... defect map" and "scratch indicator tool"). However, Robin does not disclose rest of the claim limitations. Instead of Robin, Kitawaki discloses calculating a transformation of the master dust map to generate a manifestation of the master dust map that includes information describing dust location and appearance as a function of one or more optical parameters (Fig. 4; paragraphs [0035], "focal length", "f-stop number" and "dust addresses") including exit pupil dimension of the lens assembly or distance of dust from a surface of the electronic sensor array (paragraphs [0007] and [0008], "solid-state image sensor"; Fig. 1-4; paragraph [0032], "CCD") that corresponds to a focal plane of the lens assembly (paragraph [0012], "magnification of the imaging lens" and "f-stop number"; Fig. 4; paragraphs [0035], "focal length", "f-stop number"), or both; updating

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the master dust map or the manifestation of said master dust map, or both, in accordance with the analyzing (Fig. 3; paragraph [0036]).

It would have been obvious to one of ordinary skill in the art to apply the steps of manipulating focal length, f-stop number and dust addresses as taught by Kitawaki, to improve the detection system of Robins for the predictable results of removing the defects of the image for a better quality.

Regarding claim 2, Robins further discloses wherein said one or more acquired images comprising one or more calibration images (Fig. 1; page 9, "... means for acquiring a digital image ...").

Regarding claim 3, Robins further discloses said threshold distribution being determined based upon an analysis of the ability of an automatic blemish correction module of said digital image acquisition system to reasonably correct such blemishes within said images (pages 17-18, "... correction ...").

Regarding claim 7, Robins discloses all the previous claim limitations except the one specified in claim 7. However, Kitawaki discloses wherein said one or more acquired images are acquired with specific acquisition setting comprising one or more of aperture, shutter speed, sensitivity, and subject matter (paragraph [0012], "magnification of the imaging lens" and "f-stop number"; Fig. 4; paragraphs [0035], "focal length", "f-stop number").

Regarding claim 8, Kitawaki further discloses, wherein said specific acquisition settings being automatically determined in a specific calibration mode on said digital

image acquisition system (paragraph [0012], “magnification of the imaging lens” and “f-stop number”; Fig. 4; paragraphs [0035], “focal length”, “f-stop number”).

Regarding claim 10, Kitawaki further discloses wherein said analyzing being based on defined in relations with change of lenses (paragraph [0012], “magnification of the imaging lens” and “f-stop number”; Fig. 4; paragraphs [0035], “focal length”, “f-stop number”).

Regarding claims 43-47 and 49, claims 43-47 and 49 are analogous and correspond to claims 1-3, 7-8 and 10, respectively. See rejection of claims 1-3, 7-8 and 10 for further explanation.

Regarding claims 50-54 and 56, claims 50-54 and 56 are analogous and correspond to claims 1-3, 7-8 and 10, respectively. See rejection of claims 1-3, 7-8 and 10 for further explanation.

6. Claims 9, 48, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (WO 03/019473) in view of Anderson (US 6,002,436).

Regarding claim 9, Robins discloses all the previous claim limitations except the claim limitation specified in claim 9. However, Anderson discloses analyzing being based on defined time interval since last said analyzing (col. 3, lines 8-17, “time lapse sequence” and “time interval”).

It would have been obvious to one of ordinary skill in the art to apply the steps of applying the time lapse sequence to improve the detection system of Robins for the

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predictable results of allowing the image capture unit to be placed in a time interval sequence.

Regarding claims 48 and 55 are analogous and correspond to claim 9. See rejection of claim 9 for further explanation.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN Wahnkyo LEE whose telephone number is (571)272-9554. The examiner can normally be reached on Monday - Friday (Alt.) 7:30 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHARLES KIM/
Primary Examiner, Art Unit 2624

/John Wahnkyo Lee/
Examiner, Art Unit 2624